

REMARKS

Reconsideration and timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the pending Office Action, the Examiner rejected claims 1-6 and 9-14, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847 (U.S. Patent No. 5,450,847) in view of Bredesen '708 (U.S. Patent No. 3,839,708); rejected claims 1, 2, 4, 6, 10-11, and 13, under 35 U.S.C. §103(a), as being unpatentable over Goldstein '851 (U.S. Patent No. 5,515,851) in view of Bredesen '708; rejected claims 1, 2, 4, 6, 11, and 13, under 35 U.S.C. §103(a), as being unpatentable over Hirshman '324 (U.S. Patent No. 4,854,324) in view of Bredesen '708; rejected claims 3 and 14, under 35 U.S.C. §103(a), as being unpatentable over Hirshman '324 or Goldstein '851 in view of Bredesen '708 and Kampfe '847; rejected claim 15, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847 or Goldstein '851 in view of Bredesen '708 and Cornacchia '403 (U.S. Patent No. 5,472,403); rejected claims 20, 26-33, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847 in view of Cornacchia '403; rejected claims 20, 26-28, and 30-31, under 35 U.S.C. §103(a), as being unpatentable over Goldstein '851 in view of Cornacchia '403; rejected claim 16, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847, Goldstein '851 or Hirshman '324 in view of Bredesen '708 and Barlow '002 (U.S. Patent No. 5,053,002); rejected claim 34, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847, or Goldstein '851 in view of Bredesen '708, Cornacchia '403, and Barlow '002; rejected claims 35-37, 40, 42-44, under 35 U.S.C. §103(a), as being unpatentable over Kampfe '847 in view of Bredesen '708 and Barlow '002; and rejected claims 35-37 and 42, under 35 U.S.C. §103(a), as being unpatentable over Goldstein '851 in view of Bredesen '708 and Barlow '002.

Prior to this Amendment, claims 1-6, 9-16, 20, 26-37, 40, and 42-44 were pending, of which claims 1, 20, and 35 were independent. By this Amendment, the Specification has been amended to include omitted reference numerals, claims 1, 10, 20, 30, and 35 have been amended and claim 26 has been cancelled without prejudice

or disclaimer. In addition, new dependent claims 46-54 have been introduced to protect other aspects of the present invention. Applicant submits that no new matter has been added. As such, claims 1-6, 9-16, 20, 27-37, 40, 42-44, and 46-54 are currently presented for examination, of which claims 1, 20, and 35 remain as the independent claims.

Applicant respectfully traverse the rejections, under 35 U.S.C. §103(a), for the following reasons:

I. Prior Art Rejections of Claims 1, 20, & 35 Under 35 U.S.C. §103(a)

Independent claim 1, as amended, sets forth a system for producing an image of a patient, comprising, *inter alia*:

a pressurizing unit configured to increase pressure of the fluid medium being injected into the patient . . .

an electronic interface configured to provide information input and output . . .

a control unit adapted to adjust the condition of the fluid medium injected into the patient, the control unit being communicatively coupled to the electronic interface and the pressurizing unit . . .

a hospital information system that provides information about the patient . . .

wherein the electronic interface is configured to communicate with the pressurizing unit, the imaging unit, and the hospital information system.

As indicated above, amended claim 1 now positively recites the use of a hospital information system and a pressurizing unit configured to increase pressure of the fluid medium being injected into the patient. Claim 1 further recites that the control unit is communicatively coupled to the electronic interface and the pressurizing unit and that electronic interface is configured to communicate with the pressurizing unit, the imaging unit, and the hospital information system. These features are amply supported by the embodiments disclosed in the Specification. (*See, e.g.,* Specification, para. [0027-0028], [0030], [0035]; FIGs. 1, 2).

Unlike the present invention, however, there is nothing in any of the applied §103 references, that teach or suggest the combination of features recited in claim 1. In particular, the Kampfe '847 reference presents a process for the production of contrast medium in suitable dosage forms. (See, col. 1, lines 14-15). In so doing, Kampfe '847 discloses a first metering element **26**, a second metering element **28**, which are connected by signal lines **34**, **36** to a control unit **42**, that includes an input unit **44** in which specific data can be input into the control unit **42**. (See, col. 8, lines 25-38; FIG. 1). Kampfe '847 goes on to state that metering elements **26**, **28** operate under the force of gravity but can be substituted with other metering devices, such as for example, peristaltic pumps. (See, col. 9, lines 1-10; FIG. 1).

In contrast to the present invention, Kampfe '847 neither contemplates nor otherwise suggests an electronic interface capable of communicating with the pressurizing unit, the imaging unit, and the hospital information system, as required by claim 1.

Similarly, the Goldstein '851 reference discusses an angiographic fluid control system. Goldstein '851 discloses fluid reservoir cabinets that contain pneumatic or electric motor driven piston-plunger systems, which connect to and control fluid injection output from disposable fluid reservoirs. (See, col. 2, lines 60-64; FIG. 2). The pneumatic driven piston-plunger systems are connected to and controlled by a microprocessor and are fully integrated and permanently attached into the fluid reservoir cabinets. (See, col. 3, lines 30-33; FIG. 2). There is no mention, however, of a pressurizing unit configured to increase pressure of the fluid medium being injected into the patient – much less the use of an electronic interface capable of communicating with the pressurizing unit, the imaging unit, and the hospital information system, as required by claim 1. Nor is there any suggestion to do so.

The Hirshman '324 reference presents an angiographic injector device for use in x-ray photography for delivering contrast media to a patient at controlled rates and pressures. (See, col. 1, lines 9-11). The Hirshman '324 reference discloses that the contrast media to be injected into the patient is normally contained in a syringe, the

plunger being actuated to force the media into the vascular system of a patient through a catheter. The delivery rate and volume are normally derived from position signals indicative of the plunger position. Pressure is derived from current supplied to the motor. (See, col. 4, lines 44-50). Hirshman '324 goes on to describe in detail the mechanical assembly that drives the piston of the syringe containing the contrast media. In particular, a movable drive plate **200** actuates a piston **202** of a syringe **204** by way of a shaft **206**. The piston **202** connects to a spring clip **208** when engaged therewith and the spring clip **208** is fastened to the end of the shaft **206**. A plunger drive motor (corresponding to the motor **40** of the controller) actuates the shaft **206** through the plunger plate **200** and linear movement of the plunger plate is guided by a guide rod **210**. (See, col. 7, lines 30-33; FIG. 5A).

With this said, Applicant notes that the Hirshman '324 reference clearly fails to teach *inter alia*, an electronic interface capable of communicating with a hospital information system, as required by claim 1. Nor is there any suggestion to do so.

Moreover, the Bresden '708 reference relied upon by the Examiner is directed to an input-output terminal that sends and retrieves medical information from a hospital information data processing system **80**. (See, col. 4, lines 62-64; FIG. 2). As best understood, however, there is nothing in Bresden '708 that teaches or suggests that terminal **80** is capable of communicating with a pressurizing unit and an imaging unit, as well as the hospital information system, as required by claim 1. Nor is there any suggestion to do so.

Furthermore, as best understood, none of the remaining references cure the deficiencies noted above. As such, none of the references of record, whether taken alone or in any reasonable combination, can be reasonably construed to render claim 1 unpatentable, under 35 U.S.C. §103(a).

For the reasons discussed above, Applicant submits that claim 1 is patentably distinguishable over all the references of record. Accordingly, withdrawal of the prior art rejections of claim 1, under 35 U.S.C. §103(a), is respectfully requested. Moreover,

because claims 2-6, 9-16, and (new) claims 46-48 depend either directly or indirectly from claim 1, claims 2-6, 9-16, and 46-48 are patentable for at least the reasons presented with respect to claim 1 in addition to their recitation of further limitations.

Furthermore, because amended independent claims 20 and 35 positively recite features similar to claim 1, claims 20 and 35 are patentable for at least the reasons presented with respect to claim 1. Additionally, because claims 26-34 and (new) claims 49-50 depend direct or indirectly from claim 20 and claims 36-37, 40, 42-44, and (new) claims 52-54 depend from claim 35, claims 26-34 and 49-50 and claims 36-37, 40, 42-44, and claims 52-54 are patentable for at least the reasons presented with respect to claims 1, 20, and 35, as well as their additional recitations.

II. Request for Initialed Forms PTO-1449

Even after numerous requests to forward initialed copies of the PTO-1449, including a Petition for Consideration of Information Disclosure Statement, filed on March 3, 2004, the Examiner still has not acknowledged these requests in the pending Office Action - much less properly respond to them.

Applicant, therefore, requests, once again, that the Examiner consider the Information Disclosure Statement and listed references, filed on March 4, 2002, and indicate the consideration thereof by initialing the corresponding PTO-1449 forms, and forward copies of the initialed forms to the undersigned Attorney of Record with the next office correspondence.

III. Conclusion

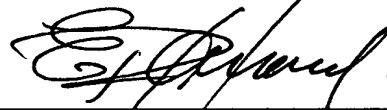
All matters having been addressed, Applicant respectfully requests the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of pending claims 1-6, 9-16, 20, 27-37, 40, 42-44, and 46-54.

Applicant's Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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